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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,815	09/26/2003	Peter J. Hanberg	42P16448	6864

7590

02/09/2006

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EXAMINER

GOUDREAU, GEORGE A

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,815

Applicant(s)

HANBERG, PETER J.

Examiner

George A. Goudreau

Art Unit

1763

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

George A. Goudreau
GEORGE GOUDREAU
PRIMARY EXAMINER
1-06

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1763

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Tohyama et. al. (5,889,913).

Tohyama et. al. disclose a process for fabricating an optical semiconductor device which is comprised of the following steps:

-A laminate which is comprised of SiO₂ layer (51)/ InP layer (50)/ optical waveguide layer (2) are formed onto the surface of an InP substrate (1).;

-A mesa stripe (11) is formed by patterning the laminate structure to form a SiO₂ stripe (51)/ a InP cap/ an optical waveguide layer which functions as an active layer (2).;

-An InP layer (3) is used to bury the mesa stripe (11).;

-An InGaAsP spacer layer (52) is formed onto the surface of the wafer in those regions where no SiO₂ is exposed.;

-The SiO₂ stripe (51) is etch down to the InP cap (50) which functions as an etch stop.;

- SiO₂ stripes (53) are formed onto the surface of the spacer layer (52).;
- An InP cladding layer (4) is grown onto the surface of the wafer in those regions where no SiO₂ is exposed. The InP cladding layer forms a T-shaped structure, which is comprised of a ridge on a shank.;
- An InGaAs contact layer (5) is formed onto the surface of the InP cladding layer.;
- The SiO₂ stripes (53) are removed from the surface of the wafer.;
- The InGaAsP spacer layer (52) is partially removed from the surface of the wafer.;
- A p-type ohmic contact (7) is formed onto the surface of the contact layer (5).;
- A SiO₂ layer (6) is used to conformably coat the surface of the wafer.;
- The T-shaped structure (12) is buried in a polyimide layer (54).; and
- A bonding pad (9) is formed onto the surface of the wafer.

This is discussed specifically in columns 12-14 ; and discussed in general in columns 1-16. This is shown specifically in figures 17-19; and shown in general in figures 1-19.

They further teach that the T-shaped structure, which is formed, makes it possible to reduce the element of parasitic capacitance and obtain a sufficiently low element series resistance at the same time.

3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Yang (6,841,814).

See PCT search report.

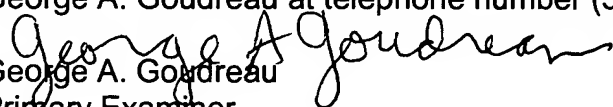
4. Claims 1-5, and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wakejima et. al. (2002/0025664)

See PCT search report.
5. Claims 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hirano (5,939,737).

See PCT search report.
6. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nuyen et. al. (FR 2,542,921).

See PCT search report.
7. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
9. Any inquiry concerning this communication should be directed to examiner

George A. Goudreau at telephone number (571)-272-1434


George A. Goudreau
Primary Examiner
Art Unit 1763